

REMARKS

Claims 1 – 55 are pending in the application. Claims 1 – 55 have been rejected. No new claims have been added. In an effort to expedite the prosecution of this application in light of the 38 page Office Action, Applicants shall limit their remarks to address the rejections of the independent claims.

Claims 1 and 19 stand rejected under *Surace et al.*, U.S. Patent No. 6,334,103 (*Surace*).

The present invention, as set forth by independent claim 1, relates to a method for providing a voice user interface that interacts with a user at a first level of formality, monitoring a history of user interaction with the voice user interface, and adjusting the voice user interface to interact with the user with a second level of formality based on the history of user interaction.

The present invention, as set forth by independent claim 19, relates to a method of providing voice user interface services which includes providing a user with an interactive voice user interface, monitoring the interaction of the user with the voice user interface to determine a user experience level, and providing the user with an extended menu of options, if the user experience level has not reached a predetermined threshold.

Surace discloses a voice user interface with personality. The voice user interface includes selecting a prompt based on various context situations such as a previously selected prompt and the user's experience with using the voice user interface. *Surace* shows operation of a voice user interface when interacting with a subscriber to, for example, retrieve an email message, in Figure 11 and the accompanying description. More specifically, *Surace* sets forth that the voice user interface with personality may determine whether there is a problem (e.g., the user is requesting to access email, and the email server of the system is down, and thus, unavailable). (*Surace*, Col. 17, lines 42 – 45.) If there is a problem, operation proceeds to one stage and if there is not a problem, operation proceeds to another stage, e.g., stage 1106 and stage 1108, respectively. (*Surace*, Col. 17, lines 45 – 49.) At stage 1108, voice user interface with personality determines whether multiple voices are required at this stage of operation during interactions with the subscriber (e.g., the subscriber is requesting that an email message be read to the subscriber, and TTS software uses a synthesized voice to read the text of the email

message, this is a different voice than the recorded voice of recorded speech software 411). If so, then operation proceeds to stage 1110. At stage 1110, the voice user interface executed multiple voices rules (e.g., multiple voices rules 506). (Surace, Col. 17, lines 50 – 60.) Surace shows operation of a voice user interface when interacting with a subscriber to, for example, modify an appointment command, in Figure 12 and the accompanying description.

Surace, taken alone or in combination, does not teach or suggest a method for providing a voice user interface that interacts with a user at a first level of formality, *monitoring a history of user interaction with the voice user interface*, and *adjusting the voice user interface to interact with the user with a second level of formality based on the history of user interaction*, all as required by independent claim 1. Accordingly, claim 1 is allowable over Surace. Claims 2 - 9 depend from claim 1 and are allowable for at least this reason.

Surace, taken alone or in combination, does not teach or suggest a method of providing voice user interface services which includes providing a user with an interactive voice user interface, monitoring the interaction of the user with the voice user interface *to determine a user experience level*, and *providing the user with an extended menu of options, if the user experience level has not reached a predetermined threshold*, all as required by independent claim 19. Accordingly, claim 19 is allowable over Surace. Claims 20 - 22 depend from claim 19 and are allowable for at least this reason.

Claim 10 stands rejected under Kuo et al., U.S. Patent No. 6,418,440 (Kuo).

The present invention, as set forth by independent claim 10, relates to a method of providing a voice user interface which includes creating a user profile having preference information for a user, and providing a virtual host with a consistent personality defined in accordance with the user profile.

Kuo discloses a method for holding an interactive dialogue session between a user and a machine such that the dialogue advantageously responds to the user's requests. According to the method, a system's capabilities are automatically modified based on dynamically changing external databases. The system includes a dialogue manager that defines a means for the computer system to recognize a user's request and then respond through some appropriate action,

such as, for example, provide a particular audio speech output. (Kuo, Col. 1, line 21 – 27). Kuo discloses a profile manager which generates and maintains a user profile. The user profile contains knowledge about the user's intent, both in types of services desired, as well as in preferences for service organization and presentation. (Kuo, Col. 5, lines 10 – 15).

Kuo, taken alone or in combination, does not teach or suggest a method of providing a voice user interface which includes creating a user profile having preference information for a user, and *providing a virtual host with a consistent personality defined in accordance with the user profile*, all as required by independent claim 10. Accordingly, claim 10 is allowable over Kuo. Claims 11 – 18 depend from claim 10 and are allowable for at least this reason.

Claim 23 stands rejected under Surace in view of Zawadzki et al., U.S. Patent No. 6,226,656 (Zawadski) and further in view of Kuo.

The present invention, as set forth by independent claim 23, relates to a voice user interface system which includes an ordered data structure including one or more domains, each domain associated with respective content, a grammar for accessing content from the ordered data structure, and a user profile for storing information about a user's preferences and history of interaction with the system wherein the grammar dynamically changes based on the information stored in the user profile to provide a natural interaction experience for the user.

Zawadski discloses an automated system for defining, creating, presenting, completing and processing generic specs. A spec server is coupled with a database management system. The spec server has a content editor, a page builder, a content reader, a rule processor, a template generator and a compatibility engine. Zawadski sets forth that a feature of the invention is a centralized data structure referred to as a domain tree which is used to generate all of the specs for a particular industry or domain. When changes are made to the domain tree, all of the specs created from the tree are automatically updated to reflect the changes. (Zawadski, Col. 2, lines 23 – 28.)

Surace, Zawadzki, and Kuo, taken alone or in combination, do not teach or suggest a voice user interface system which includes an ordered data structure including one or more domains, each domain associated with respective content, a grammar for accessing content from

the ordered data structure, and *a user profile for storing information about a user's preferences and history of interaction with the system wherein the grammar dynamically changes based on the information stored in the user profile to provide a natural interaction experience for the user*, all as required by independent claim 23. Accordingly, claim 23 is allowable over Surace, Zawadzki, and Kuo. Claims 24 – 32 depend from claim 23 and are allowable for at least this reason.

Claim 33 stands rejected under Surace in view of Zawadzki and Rhie et al., U.S. Patent No. 5,953,392 (Rhie).

The present invention, as set forth by independent claim 33, relates to a method of providing a voice user interface which includes providing a user with a first option to visit one of a plurality of domains by uttering a voice command associated with one of the plurality of domains, the plurality of domains contained in an ordered data structure, each domain comprising respective content available for presentation to the user, visiting a first one of the plurality of domains automatically, if no response is provided by the user for the first option, providing the user with a second option to hear content of the first domain, and playing the content of the first domain, if no response is provided by the user to the second option.

Rhie discloses a system for accessing and browsing the internet through the use of a telephone and the associated DTMF signals. The system converts information content of a web page from text to speech (voice signals), signals the hyperlink selections of a web page in an audio manner, and allows selection of the hyperlinks through the use of DTMF signals generated from a telephone keypad.

Surace, Zawadzki, and Rhie, , taken alone or in combination, do not teach or suggest a method of providing a voice user interface which includes providing a user with a first option to visit one of a plurality of domains by uttering a voice command associated with one of the plurality of domains, the plurality of domains contained in an ordered data structure, each domain comprising respective content available for presentation to the user, *visiting a first one of the plurality of domains automatically, if no response is provided by the user for the first option, providing the user with a second option to hear content of the first domain, and playing the content of the first domain, if no response is provided by the user to the second option*, all as

required by independent claim 33. Accordingly, claim 33 is allowable over Surace, Zawadzki, and Rhie. Claims 34 – 46 depend from claim 33 and are allowable for at least this reason.

Claim 47 stands rejected under Surace in view of Zawadzki, Rhie, Kuo, Hemphill, U.S. Patent No. 5,774,628 (Hemphill) and Ito, U.S. Patent No. 5,029,085 (Ito)

The present invention, as set forth by independent claim 47, relates to a voice user interface system which includes an ordered data structure including one or more domains, each domain associated with content belonging to one or more categories, a grammar for accessing content from the ordered data structure. The grammar includes vocabulary comprising a plurality of terms, at least one term associated with at least one respective domain, and a set of rules for visiting said one or more domains or for playing content therein, each rule corresponding to one or more respective terms, and a user profile which includes a user preference log for storing information about a user's preference for accessing content in said one or more domains, and a user interaction history log for storing information about the user's history of interaction with the system wherein a command provided at a recognition instance is processed against the terms including in the vocabulary for recognition, and if a match is found between the command and a term, then the respective domains in the ordered data structure are visited and the content of the respective domains is played in accordance with the rule corresponding to the matched term, using a conversational style that dynamically changes based on information included in the user profile.

Hemphill discloses an automated speech recognition system. Hemphill discloses for receiving voice signals; computing the voice signals into stochastic Regular Grammars Directed Acyclic Graphs (RGDAGs) and individual grammars; processing the stochastic RGDAGs; adding the individual grammars within the RGDAG; replacing the individual grammars within the RGDAG; and deleting the individual grammars within the RGDAG.

Ito discloses a conversational-type of language analysis apparatus which includes a sentence input unit inputting a sentence, a dictionary unit and a grammar storage unit. The apparatus of Ito includes a conversational-type analysis means for selecting correct relationships by conversational interaction with a user from candidate relationships detected by an all-relationship detection means. The conversational-type analysis means has conversational object

selecting means for selecting object relationships which are objects of conversational interaction with the user and satisfy predetermined conditions.

Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito, taken alone or in combination, do not teach or suggest a voice user interface system which includes an ordered data structure including one or more domains, each domain associated with content belonging to one or more categories, a grammar for accessing content from the ordered data structure wherein the grammar includes vocabulary comprising a plurality of terms, at least one term associated with at least one respective domain, and a set of rules for visiting said one or more domains or for playing content therein, each rule corresponding to one or more respective terms, and *a user profile which includes a user preference log for storing information about a user's preference for accessing content in said one or more domains, and a user interaction history log for storing information about the user's history of interaction with the system wherein a command provided at a recognition instance is processed against the terms including in the vocabulary for recognition, and if a match is found between the command and a term, then the respective domains in the ordered data structure are visited and the content of the respective domains is played in accordance with the rule corresponding to the matched term, using a conversational style that dynamically changes based on information included in the user profile.*, all as required by independent claim 47. Accordingly, claim 47 is allowable over Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito. Claims 48 – 55 depend from claim 47 and are allowable for at least this reason.

Additionally, applicants respectfully submit that the various combinations of Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito is improper because Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito are nonanalogous prior art that have been combined with the benefit of hindsight and because Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito fail to provide a suggestion to be combined.

Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito are nonanalogous prior art because Surace relates generally to a voice user interface with personality, Zawadzki relates generally to an automated system for defining, creating, presenting, completing and processing generic specs, Rhie relates generally to a system for accessing and browsing the internet through the use of a

telephone and the associated DTMF signals, Kuo relates generally to a method for holding an interactive dialogue session between a user and a machine such that the dialogue advantageously responds to the user's requests, Hemphill relates generally to an automated speech recognition system and Ito relates generally to a language analysis apparatus.

The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d, 1443, 1446 (Fed. Cir. 1992)

Additionally, even if Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito are found to be within analogous arts, Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito do not provide a suggestion for the various combinations.

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. Wilson and Hendrix fail to suggest any motivation for, or desirability of, the changes espoused by the Examiner and endorsed by the Board.

Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fritch*, 23 USPQ 2d at 1783-84 (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)).

Further, it appears that the rejection of claims 1 – 55 is based on an improper hindsight-based obviousness analysis. In this regard, it must be recognized that hindsight reconstruction of claims based on disparate aspects of the prior art may not be employed as a valid basis for the rejection of those claims. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 312-313 (Fed. Cir. 1983); *Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593, 1595-1596 (Fed. Cir. 1987). Furthermore, an obviousness determination requires that the invention as a whole would have been obvious to a person having ordinary skill in the art. *Connell v. Sears Roebuck & Co.*, 220 USPQ 193 (Fed. Cir. 1983).

To establish obviousness based on a combination of elements disclosed in the prior art or a modification of the prior art, there must be some motivation, suggestion or teaching of the desirability of making the claimed invention. *See In re Dance*, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The motivation, suggestion or teaching to modify references may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved. *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Whether the Office Action relies on an express or implicit showing of a motivation or suggestion to modify or combine references, it must provide particular findings related thereto. *In re Dembiczak*, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence." *Id.* Thus, the Office Action must include particular *factual findings* that support an assertion that a skilled artisan would have modified the express disclosure of Surace, Zawadzki, Rhie, Kuo, Hemphill to develop the invention recited by independent claims 1, 10, 19, 23, 33 and 47. *See In re Kotzab*, 55 USPQ2d 1313, 1317. Applicant is unable to discern the requisite factual basis in Surace, Zawadzki, Rhie, Kuo, Hemphill or the Office Action.

In this regard, the Office Action appears to have engaged in a hindsight-based obviousness analysis condemned by the Federal Circuit. To prevent a hindsight-based obviousness analysis, the Federal Circuit has clearly established that the relevant inquiry for determining the scope and content of the prior art is whether there is a reason, suggestion, or motivation in the prior art or elsewhere that would have led one of ordinary skill in the art to combine or modify references. *See Ruiz v. A.B. Chance Co.*, 57 USPQ2d 1161, 1167 (Fed. Cir. 2000); *see also In Re Rouffet*, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("[T]he Board must identify specifically ... the reasons one of ordinary skill in the art would have been motivated to select the references and combine them to render the claimed invention obvious."). Applicant can detect, and the Office Action has pointed to, no motivation or suggestion that would prompt someone of ordinary in the art to look to Surace, Zawadzki, Rhie, Kuo, Hemphill in combination for a solution to the problem addressed by Applicant's invention. Such a determination that there is a suggestion or motivation to modify Surace, Zawadzki, Rhie, Kuo, Hemphill is a factual finding that is prerequisite to an ultimate conclusion of obviousness. *Sibia Neurosciences, Inc. v. Cadus Pharma. Corp.*, 55 USPQ2d 1927, 1931 (Fed. Cir. 2000). Applicant respectfully submits that the Office Action is devoid of such a finding.

Without such a finding, a *prima facie* case of obviousness in rejecting claims 1 – 55 under 35 U.S.C. § 103(a) based on the various combinations of Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito has not been made. For this further reason, Applicant respectfully submits that claims 1 – 55 are patentably distinguished over Surace, Zawadzki, Rhie, Kuo, Hemphill and Ito and Applicant respectfully requests the Examiner to remove the rejections of claims 1, 10, 19, 23, 33 and 47 and the claims depending therefrom.

CONCLUSION

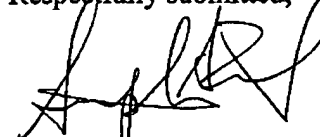
In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on August 13, 2003.


Attorney for Applicant(s)

8/13/03
Date of Signature

Respectfully submitted,



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